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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

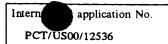
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(PCT Article 36 and Rule 70)

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Applicant's or agent's file reference 58040-A-PCT	FOR FURTHER ACTION	ON See Notifi Preliminary	cation of Transmittal of International Examination Report (Form PCT/IPEA/416)
International application No.	International filing date (day/month/year)	Priority date (day/month/year)
PCT/US00/12536	04 MAY 2000		04 MAY 1999
International Patent Classification (IPC) IPC(7): A61K 38/16 and US Cl.: 514	or national classification as 4/2, 21	nd IPC	
Applicant THE TRUSTEES OF COLUMBIA UN	VIVERSITY IN THE CITY	OF NEW YORK	
Examining Authority and is 2. This REPORT consists of a	total of sheets.	cant according to	
been amended and are the	ne basis for this report and/ tion 607 of the Administra	or sheets containing	cription, claims and/or drawings which have ng rectifications made before this Authority. under the PCT).
3. This report contains indication	ns relating to the following	ing items:	
I X Basis of the repo	rt		
II Priority			
			tion stan as industrial applicability
III Non-establishme	nt of report with regard	to novelty, inven	tive step or industrial applicability
IV Lack of unity of	invention		
V X Reasoned stateme citations and expla	nt under Article 35(2) wit anations supporting such s	h regard to novelt statement	y, inventive step or industrial applicability;
VI Certain documents	cited		
VII Certain defects in	the international application	on	
VIII X Certain observation	ns on the international app	plication	
·			
Date of submission of the demand		Date of completion	on of this report
04 DECEMBER 2000		17 ЅЕРТЕМВ	SER 2001
Name and mailing address of the IPEA Commissioner of Patents and Trade Box PCT Washington, D.C. 20231		Awhorized office JEAN C. WI	in Jawhence for
Facsimile No. (703) 305-3230		Telephone No.	(703) 308-0196

I. Basis of the report	
1. With regard to the elements of the international application	on:*
11 (7)	
i de la contrata del contrata de la contrata del contrata de la contrata del contrata de la contrata de la contrata de la contrata del contrata de la contrata del contrata de la contrata del contrata del contrata del contrata de la contrata del contrat	
	, as originally filed
pages NONE	, filed with the demand
pages NONE	, filed with the letter of
X the claims:	, as originally filed
pages	, as amended (together with any statement) under Article 19
pages NONE	, as amended (together with any statement) under rathers
	with the letter of
X the drawings:	
• •	, as originally filed
	, filed with the letter of, filed with the demand
pages NONE	,
X the sequence listing part of the description:	
pages NONE	, as originally filed
pages NONE	, filed with the demand
pages NONE	, filed with the letter of
the language of publication of the internation	
the language of the translation furnished for the or 55.3).	e purposes of international preliminary examination (under Rules 55.2 and
 With regard to any nucleotide and/or amino acid preliminary examination was carried out on the b 	d sequence disclosed in the international application, the international basis of the sequence listing:
contained in the international application in	n printed form.
filed together with the international applica	-
furnished subsequently to this Authority in	•
furnished subsequently to this Authority in	
- · ·	d written sequence listing does not go beyond the disclosure in the
• •	computer readable form is identical to the writen sequence listing has
	cellation of:
NONE	
v the description, pages	
the claims, Nos. NONE	
X the drawings, sheets#fig NONE	
5. This report has been drawn as if (some of) the	amendments had not been made, since they have been considered to go
in this report as "originally filed" and are not anne	the Supplemental Box (Rule 70.2(c)).** receiving Office in response to an invitation under Article 14 are referred to exed to this report since they do not contain amendments (Rules 70.16)
and 70.17).	s must be referred to under item 1 and annexed to this report.





statement			
Novelty (N)	Claims	1-21	YI
	Claims	NONE	
Inventive Step (IS)	Claims	1-21	YI
• · •	Claims	NONE	
Industrial Applicability (IA)	Claims	1-21	YI
	Claims	NONE	NO
IONE			
ONE			
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VIII. Certain observations on the international application

The following observations on the claims of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 1-21 are objected to as lacking clarity under PCT Rule 66.2(a)(v) because practice of the claimed invention is not enabled as required under PCT Rule 5.1(a) for the reasons set forth in the immediately preceding paragraph.

The specification indicates that a combination of a gp130 receptor ligand, specifically LIF, in combination with a growth factor, most specifically TIMP, resulted in epithelialization of metanephric mesenchyme and formation of tubules and nephrogenesis in vitro. This has confirmed the state of the art that LIF alone has little effect in vitro on growth or on ureteric-bud morphogenesis other than to stimulate the bifurcation process. The state of the art also acknowledges that renal mesangial cells both synthesize and react to LIF. LIF is not mitogenic for the mesangial cells. LIF is excreted in the urine of kidney transplant patients undergoing acute rejection but is not found in stable graft recipients. Transgenic mice that overexpress LIF develop mesangial proliferative glomerulonephritis. While numerous growth factors have some influence on kidney development, the state of the art indicates that the specification has shown a developmental effect on kidney mesangial cells of LIF combined with TIMP, such showing is insufficient to enable claims to in vivo treatments of kidney disease and failure. It remains unpredictable as to the interactions of the growth factors with the extant kidney tissue as well as the response of the transplanted primoridal kidney tissue when exposed to the in vivo biochemistry and physiology. This is particularly true of claim 4 and those claim that depend from same as there is no showing or suggestion of is supposed to occur when the LIF and the TIMP are administered. It would appear that the etiologies of the different types and causes of the kidney failure would be expected to have an effect upon how that kidney failure is treated. Therefore the cited claims are not enabled by the specification.